



Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at <http://about.jstor.org/participate-jstor/individuals/early-journal-content>.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

This year a great friend of the MONTHLY and a Professor of Mathematics in an eastern college, invested \$60. in extra copies. If one hundred of our subscribers would donate \$50. towards an endowment fund, they would be entitled to a perpetual subscription and the MONTHLY saved from the fate of its predecessors,—discontinuance in the course of a decade or two.

This number completes the second volume of the MONTHLY, and though its success in the two years during which it has been issued has not been what we hoped for, it has not been altogether discouraging. We are encouraged by words from various mathematicians of great eminence that the MONTHLY is growing in influence and favor. We believe this to be true. A glance at our list of contributors will show that it includes the best mathematicians in America. Having the support of the ablest mathematicians of this country, the MONTHLY should continue to appear each month during the year that is now upon us. The editors have, therefore, no thought of discontinuing its publication, and we trust that we may have the earnest support of all of our old subscribers in the still further enhancing of its worth. In the January number we shall use a better quality of paper and thus improve its appearance. We have on hand a number of very excellent articles from leading mathematicians which will appear during the coming year. Dr. Halsted will continue his translation of Saccheri's geometry, and Dr. Miller will continue his articles on Substitution Groups. Dr. Moore has furnished an article on An Interesting System of Quadratic Equations, which will appear in the January number. Prof. Zerr has furnished an article on the Centroid of Plane Areas, the first part of which will also appear in the January number. A great many other papers of interest and importance from prominent mathematicians may be expected. The January number will contain an interesting biography of the great Russian Mathematician, Wolfgang Bolyai, by Dr. Halsted. Other biographies of noted mathematicians will be published during the year.

A great many of our subscribers are in arrears on subscription for Vol. I. and Vol. II. We shall be greatly obliged if those owing us will kindly remit at once, as we are much in need of funds. Please send money by Draft or Post-office Money Order to B. F. Finkel, 1320 Washington Avenue, Springfield, Mo.

BOOKS AND PERIODICALS.

High School Mathematical Teaching and Text-Books. A monograph from the *Inland Educator*. By Robert J. Aley, A. M., Professor of Mathematics in the University of Indiana, Bloomington, Indiana.

In this little pamphlet of 20 pages, Professor Aley has given some good hints on the teaching of Mathematics in the High School. He blames the teacher, the text-book, or

both for the hatred so many boys and girls have for Mathematics. He says, page 13, "This feeling is not natural to the normally constituted mind. Psychologists and educators generally tell us that the mind ought to find pleasure in mathematical exercises. There is no subject in which the student can so early begin making discoveries for himself. The mere beginner in geometry can make and solve exercises that would have made Apollonius famous. This hatred for mathematics must then in general be the fault of the teacher, or of the text-book, or of both. Whichever it may be, it is in the province of the teacher to remove."

Wilkes' Rules of Multiplication. By H. C. Wilkes, Skull Run, West Virginia.

In this little pamphlet of 16 pages, Mr. Wilkes has given a number of rules for the rapid multiplication of two numbers. He says, page 1, "To be expert in multiplying, three things are essential: 1st, To be able to multiply any number by a single digit, operating from left to right; 2nd, To know instantly from memory the product of any two numbers each less than 20; 3rd, To be able to add mentally and quickly any two numbers each less than 100." We give a single Rule: *How to mentally see the product of any two numbers in the "teens."* Example: 19×16

$$\begin{array}{r} 19 \\ 6 \\ 54 \\ \hline 304 \end{array}$$

Place the unit figure of one of the numbers under the other number, and then place the product of the unit figures as shown, and add all together.

Laboratory Methods of Teaching Mathematics in Secondary Schools. By Adelia R. Hornbrook, A. M., Teacher of Mathematics in High School, Evansville, Indiana, and author of *Concrete Geometry for Common and Grammar Schools*. Pamphlet, 16 pages. Chicago: American Book Co.

In this little pamphlet, Mrs. Hornbrook has given some timely recommendations on the Laboratory Method of Teaching Mathematics from a psychological standpoint. She proves conclusively that the Laboratory Method which has worked wonders in the Department of Natural Science, can also be made to produce equally good results in Mathematics if sufficient care is taken on the part of the teacher. The term "Laboratory Method" as applied to teaching Mathematics means the method of independent personal investigation on the part of the learner under the leadership of a teacher who furnishes only the necessary aids to interpretation. The pamphlet is well worth a careful reading.

Plane and Solid Geometry. By Wooster Woodruff Beman, Professor of Mathematics in the University of Michigan, and David Eugene Smith, Professor of Mathematics in the Michigan State Normal School. 8vo. cloth and leather back, 320 pp. Boston: Ginn & Co.

In the last issue of the MONTHLY, we announced that Drs. Beman and Smith had written a Geometry and that something new along the line of Geometry might be expected. The book is now ready and we are quite sure that it will meet with public favor. It has a number of very strong points in its favor. We can only mention a few of these. (1) It invests the geometry of the Ancients with something of the spirit of Modern Mathematics; (2) Many terms that are not new but are rarely found in similar works have been freely used and thus the student is made familiar with a nomenclature that is very essential to the study of Modern Higher Mathematics; (3) Methods of attack are suggested early, and at

the end of Book III. are treated with considerable fullness ; (4) Historical notes, which have a tendency to relieve the monotony of class routine and awaken interest in even the most stupid and indifferent student, are frequently inserted ; (5) A biographical table containing the names of forty-two mathematicians, Ancient and Modern, who have been instrumental in shaping the course of Mathematics, is appended ; and (6), a table of Etymologies is also appended.

The value of a table of Etymologies can not be over estimated. The student coming in contact with new terms will naturally be interested in the etymology, a study of which will fix the meaning in his mind. I believe that it would have proved even more valuable had the etymology been given in connection with the term when it is used in the text.

The principles of Duality and Continuity are illustrated and explained. The book contains 783 exercises for original work. The book is a most admirable one and we take pleasure in recommending it to any who are seeking a good text on geometry.

B. F. F.

The Cosmopolitan. An International Illustrated Monthly Magazine. Edited by John Brisben Walker. Price, \$1.00 per year. Single number, 10 cents. Irvington-on-the-Hudson, New York.

No one ever thought of introducing so expensive a feature as lithographic color work in the days when the leading magazines sold for \$4.00 a year and 35 cents a copy. But times change, and the magazines change with them. It has remained for *The Cosmopolitan*, sold at one dollar a year, to put in an extensive lithographic plant capable of printing 320,000 pages per day (one color). The January issue presents as a frontispiece a water-color drawing by Eric Pape, illustrating the last story by Robert Louis Stevenson, which has probably not been excelled even in the pages of the finest dollar French periodicals. The cover of *The Cosmopolitan* is also changed, a drawing of page length by the famous Paris artist Rossi, in lithographic colors on white paper takes the place of the manilla back with its red stripe. Hereafter the cover is to be a fresh surprise each month.

The Review of Reviews. An International Illustrated Monthly Magazine. Edited by Dr. Albert Shaw. Price, \$2.50 per year. Single number, 25 cents. The Review of Reviews Co., New York.

During the closing weeks of 1895 the daily papers have published an extraordinary amount of interesting and important news. It is worth something to the busy newspaper reader to have this mass of information taken up, arranged, digested and reviewed in a calm and intelligent manner. The *Review of Reviews* performs this service very efficiently every month. The number for January, 1896, is especially strong in this respect. The editorial department called "The Progress of the World," is distinguished for its able handling of national and international topics of the hour. In fact, the *Review* occupies a unique position as a truly "international magazine." Its soundly "American" stand on the Venezuelan question is significant.

THE AMERICAN MATHEMATICAL MONTHLY's Clubbing List :

	REGULAR PRICE.	WITH MONTHLY.
The Review of Reviews.....	\$2.50.....	\$4.00
The Forum.....	3.00.....	4.50
The Cosmopolitan.....	1.00.....	2.85
The Arena.....	3.00.....	4.50
The Century.....	4.00.....	5.50
St. Nicholas.....	3.00.....	4.50
Popular Astronomy.....	2.50.....	4.50
Atlantic Monthly.....	4.00.....	5.00
The Critic (weekly).....	3.00.....	5.00
The Ohio Educational Monthly.....	1.50.....	3.50
American Journal of Education.....	1.00.....	2.50
McClure's.....	1.00.....	2.80
Mathematical Magazine (quarterly).....	1.00.....	3.00
Annals of Mathematics (bi-monthly).....	2.00.....	4.00